

834

R-F POWER AMPLIFIER

Filament	Thoriated Tungsten	
Voltage	7.5	a-c or d-c volts
Current	3.1	amp. ←
Amplification Factor	10.5	
Direct Interelectrode Capacitances:		
Grid to Plate	2.6	μμf
Grid to Filament	2.2	μμf
Plate to Filament	0.6	μμf
Maximum Overall Length		6-7/8"
Maximum Diameter		2-11/16"
Bulb		S-21
Base		Medium 4-Pin, Bayonet
RCA Socket (Type UR-542A)		Stock No.9919

Cooling- Forced air from fan directed at middle and upper portions of bulb is recommended for all classes of service above 60 Mc.

Maximum Ratings Are Absolute Values

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

R-F POWER AMPLIFIER - Class B Telephony

Carrier conditions per tube for use with a max. modulation factor of 1.0

D-C Plate Voltage			1250 max.	volts
D-C Plate Current			100 max.	ma.
Plate Input			75 max.	watts
Plate Dissipation			50 max.	watts
Typical Operation:				
D-C Plate Voltage	750	1000	1250	volts
D-C Grid Voltage #	-70	-90	-115	volts
Peak R-F Grid Voltage	90	100	115	volts
D-C Plate Current	50	50	50	ma.
D-C Grid Current **	1.0	0.5	0	approx. ma.
Driving Power o **	3.3	3.1	3.0	approx. watts
Power Output	11	16	20	approx. watts

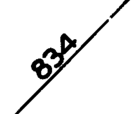
PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony

Carrier conditions per tube for use with a max. modulation factor of 1.0

D-C Plate Voltage		1000 max.	volts
D-C Grid Voltage		-400 max.	volts
D-C Plate Current		100 max.	ma.
D-C Grid Current		20 max.	ma.
Plate Input		100 max.	watts
Plate Dissipation		35 max.	watts
Typical Operation:			
D-C Plate Voltage	750	1000	volts
D-C Grid Voltage *	14500	17700	ohms
	-290	-310	volts
Peak R-F Grid Voltage	415	435	volts
D-C Plate Current	90	90	ma.
D-C Grid Current **	20	17.5	approx. ma.
Driving Power **	7.5	6.5	approx. watts
Power Output	42	58	approx. watts

* Obtained by grid-leak resistor or by partial self-bias methods.
o At crest of a-f cycle with modulation factor of 1.0.
**, #: See next page.
← Indicates a change.

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R-F POWER AMPLIFIER

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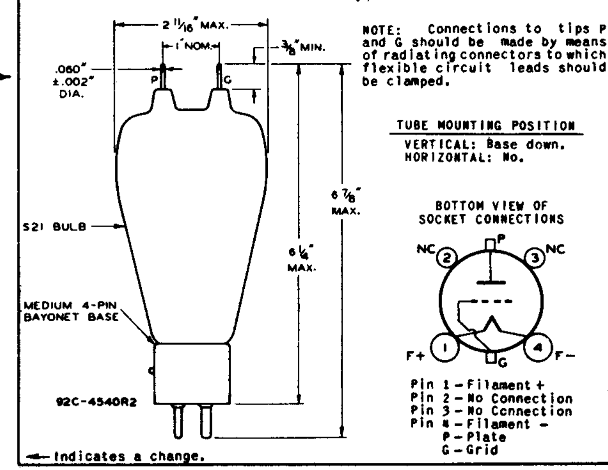
R-F POWER AMPLIFIER & OSCILLATOR – Class C Telegraphy

Key-down conditions per tube without modulation##

D-C Plate Voltage			1250	max.	volts
D-C Grid Voltage			-400	max.	volts
D-C Plate Current			100	max.	ma.
D-C Grid Current			20	max.	ma.
Plate Input			125	max.	watts
Plate Dissipation			50	max.	watts
Typical Operation:					
D-C Plate Voltage	750	1000	1250		volts
D-C Grid Voltage †	-175	-200	-225		volts
	8750	11400	15000		ohms
	1600	1850	2150		ohms
Peak R-F Grid Voltage	300	325	350		volts
D-C Plate Current	90	90	90		ma.
D-C Grid Current **	20	17.5	15	approx.	ma.
Driving Power **	5.5	5.0	4.5	approx.	watts
Power Output	42	58	75	approx.	watts

\# For a-c filament supply. If d.c. is used, the stated voltage values should be decreased by approx. one-half of the rated filament voltage.
† Obtained from fixed supply, by grid resistor (8750, 11400, 15000), or cathode resistor (1600, 1850, 2150).
\## Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.
** Subject to wide variations as explained on sheet TRANS. TUBE RATINGS.

Data on operating frequencies for the 834 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY. See also "Cooling" under this type.



→ Indicates a change.

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AVERAGE PLATE CHARACTERISTICS

E_f = 7.5 VOLTS D.C.

PLATE VOLTS (E_b)

0 500 1000 1500 2000 2500

PLATE MILLIAMPERES

400 300 200 100 0

JAN. 21, 1936

RCA RADIOTRON DIVISION

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